

Appln. No. 10/033,875
Amendment
Reply to Office Action Dated May 8, 2003

Docket No. 304-773

REMARKS

The foregoing amendments and these remarks are in response to the Office Action dated May 08, 2003. This amendment is timely filed.

At the time of the Office Action, claims 2-8, 10-15, 18, and 20-60 were pending in the application. In the Office Action, claims 3-8, 11, 13-15, 18, 20, 26-28, 32-39, 43-45, 47-48, 52-55, 57-58 were rejected under 35 U.S.C. §102(b). Claims 2, 10, 12, 21, 23-25, 29-31, 40-42, 46, 49-51, 59-60 and 56 were rejected under 35 U.S.C. §103(a).

I. Claim Rejections on Art

Claims 3-8, 11, 13-15, 18, 20, 26-28, 32-39, 43-45, 47-48, 52-55, and 57-58 were rejected under 35 U.S.C. §102(b) as being anticipated by US Patent No. 6,072,165 to Feldman ("Feldman"). Claims 12, 46, and 56 were rejected under 35 U.S.C. §103(a) as being unpatentable over Feldman in view of US Patent No. 5,893,996 to Gross et al. ("Gross"). Claims 2, 21, 23-24, 29-31, 40-42, 49-51, and 59-60 were rejected under 35 U.S.C. §103(a) as being unpatentable over Feldman in view of US Patent No. 4,431,908 to Fischer et al. ("Fischer"). Claims 10 and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Feldman.

Prior to discussing the rejections on art, a brief review of the basic principle of the invention is believed appropriate. The basic principle of the invention is to provide a device for determining the temperature of a cooking vessel placed on a hotplate of a heating appliance. The claimed device consists of two parts.

The first part is the flat measuring element, which is provided on the top of the hotplate. The measuring element can have defined properties as it is provided with the hotplate. Cooking vessels do not have such defined properties as they come in many variations, materials and colours which all influence the temperature behaviour as well as radiation of temperature differently.

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The second part is the device for determining the temperature of the measuring element. This device is placed beneath the measuring element, in most cases below the hotplate. So the measuring element is a kind of adapter for measuring the temperature of the cooking vessel.

The feature that the at least one measuring element is separate from the device for determining the temperature of the measuring element has been added to all the independent claims. In addition, the independent claims have been amended to recite that an underside of the at least one measuring element is in a visible connection with the device for determining the temperature of the measuring element. Further, the independent claims have been amended to recite that the determination of the measuring element temperature takes place from below through the hotplate.

The advantage of the device and method claimed in the present application is that with the measuring element in contact with the underside of the cooking vessel, a normalized measuring element can be provided. Furthermore, the two-part construction of the device for determining the temperature of a cooking vessel has the significant advantage that the measuring element can be a passive measuring element, for example only a flat coating or the like. The device for determining the temperature of the measuring element can be located underneath the hotplate and as such can be protected from damages or the like. As the measuring element is always in contact with the underside of the cooking vessel and is applied to the top of the cooking surface in a defined way, there are no troubling interferences or the like.

The prior art documents of Feldman, Gross et al. and Fischer et al. describe devices which are only in a one-part form.

Feldman describes electrical thermocouple junctions, which are printed onto a substrate and form the measuring sensors themselves. There is no division between a measuring element on one hand and a device for determining the temperature of the measuring element on the other hand.

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Gross et al. describes a sensor for detecting the position of a cooking vessel on the hotplate. This is, on one hand, not a device for determining any temperature. Furthermore, there is no two-part form of such a device. A sensor for detecting the presence of a cooking vessel cannot be compared with a sensor or a device for determining the temperature of a cooking vessel.

Fischer et al. discloses an automatic temperature regulator 41, which can be located beneath a hotplate and connected to a sensor member 40, which is in direct contact with the underside of a cooking vessel. There is no hint as to how the temperature detection may take place without any contact, as the sensor member 40 is connected to the temperature regulator 41 via a thin tube, as can be taken from figure 1.

Notably, in the device and method according to the present claims, no active measuring sensor element or the like has to be provided on the top of the hotplate, but only the passive measuring element. The device for determining the temperature of the measuring element, which usually is much more complicated and needs more protection from damaging and other influences which are disturbing, can be provided below the hotplate. Furthermore, as there is no connection between the measuring element and the device with as direct contact, the hotplate can be constructed without any hole or breakthrough. Especially in connection with glass ceramic plates, this is a major advantage. The hotplate described in Fischer et al. has a major central hole through which the tube between the sensor member 40 and automatic temperature regulator 41 runs.

These differences are not taught or suggested by the cited prior art documents. For these reasons, the independent claims are believed patentable, and in condition for allowance. The dependent claims are believed patentable because of their dependence upon allowable base claims, and because of the further features recited.

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II. Conclusion

Applicant has made every effort to present claims which distinguish over the prior art, and it is believed that all claims are in condition for allowance. Nevertheless, Applicant invites the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. In view of the foregoing remarks, Applicant respectfully requests reconsideration and prompt allowance of the pending claims.

Respectfully submitted,

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